pa1106: Factoring with box when $a = $ prime (v1)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $3x^2 + 31x + 56$.

*	x	
3x	$3x^2$	
		56

ANSWER:

Question 2

Use the box to factor $5x^2 - 3x - 14$.

$*$	x	
$5x$	$5x^2$	
		-14

ANSWER:

Question 3

Use the box to factor $7x^2 - 61x + 40$.

$*$		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v2)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $3x^2 + 26x + 16$.

*	x	
3x	$3x^2$	
		16

ANSWER:

Question 2

Use the box to factor $7x^2 - 19x - 6$.

*	x	
7x	7x^2	
		-6

ANSWER:

Question 3

Use the box to factor $5x^2 - 14x + 8$.

*		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v3)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $3x^2 + 17x + 20$.

*	x	
3x	$3x^2$	
		20

ANSWER:

1

Question 2

Use the box to factor $5x^2 + 37x - 72$.

	x	
5x	$5x^2$	
		-72

ANSWER:

Question 3

Use the box to factor $7x^2 - 72x + 81$.

ANSWER:

pa1106: Factoring with box when $a =$ prime (v4)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 47x + 30$.

*	x	
7x	$7x^2$	
		30

ANSWER:

Question 2

Use the box to factor $3x^2 - 14x - 49$.

*	x	
3x	3x²	
		−49

ANSWER:

Question 3

Use the box to factor $5x^2 - 48x + 27$.

*		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v5)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	2x²	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $5x^2 + 39x + 28$.

*	x	
5x	5x²	
		28

ANSWER:

Question 2

Use the box to factor $3x^2 + 16x - 64$.

*	x	
3x	3x²	
		− 64

ANSWER:

Question 3

Use the box to factor $7x^2 - 32x + 16$.

*		

ANSWER:

pa1106: Factoring with box when $a =$ prime (v6)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	2x^2	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $3x^2 + 17x + 20$.

*	x	
3x	3x^2	
		20

ANSWER:

Question 2

Use the box to factor $5x^2 + 12x - 9$.

*	x	
5x	5x^2	
		-9

ANSWER:

Question 3

Use the box to factor $7x^2 - 52x + 21$.

*		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v7)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $5x^2 + 43x + 56$.

*	x	
5x	$5x^2$	
		56

ANSWER:

Question 2

Use the box to factor $3x^2 - 17x - 56$.

	$*$	x	
3x		$3x^2$	
			-56

ANSWER:

Question 3

Use the box to factor $7x^2 - 37x + 36$.

	$*$		

ANSWER:

2

pa1106: Factoring with box when $a = $ prime (v8)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 22x + 16$.

*	x	
7x	$7x^2$	
		16

ANSWER:

Question 2

Use the box to factor $5x^2 + 16x - 16$.

*	x	
5x	$5x^2$	
		-16

ANSWER:

Question 3

Use the box to factor $3x^2 - 28x + 49$.

*		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v9)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 44x + 45$.

*	x	
7x	$7x^2$	
		45

ANSWER:

Question 2

Use the box to factor $3x^2 - 8x - 35$.

*	x	
3x	$3x^2$	
		-35

ANSWER:

Question 3

Use the box to factor $5x^2 - 21x + 18$.

*		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v10)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	$2x^2$	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 33x + 20$.

*	x	
7x	$7x^2$	
		20

ANSWER:

Question 2

Use the box to factor $3x^2 - x - 24$.

*	x	
3x	$3x^2$	
		-24

ANSWER:

Question 3

Use the box to factor $5x^2 - 23x + 24$.

*		

ANSWER:

pa1106: Factoring with box when $a = $ prime (v11)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	2x²	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $5x^2 + 34x + 45$.

*	x	
5x	5x²	
		45

ANSWER:

Question 2

Use the box to factor $7x^2 - 43x - 42$.

	x	
7x	7x^2	
		-42

ANSWER:

Question 3

Use the box to factor $3x^2 - 28x + 49$.

ANSWER:

pa1106: Factoring with box when $a =$ prime (v12)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18, until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	−6
2x	2x²	−12x
3	3x	−18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $5x^2 + 34x + 24$.

*	x	
5x	5x²	
		24

ANSWER:

Question 2

Use the box to factor $7x^2 + 60x - 27$.

*	x	
7x	$7x^2$	
		-27

ANSWER:

Question 3

Use the box to factor $3x^2 - 13x + 12$.

*		

ANSWER: